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| 10/749,006 | 12/30/2003 | Ellen Lasch | 37355-169 | 8389 |

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| EXAMINER |
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MAI, THIEN T

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| ART UNIT | PAPER NUMBER |
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2876

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 01/29/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/749,006 | LASCH ET AL. | |
| | Examiner | Art Unit | |
| | Thien T. Mai | 2876 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/22/2006 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim(s) 1-14, 18-20 and 22 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner (20050194453) in view of Roberts (6025283).

Conner discloses a transaction card comprising:

- a first layer of metal position at bottom of the transaction card (Specification par. 0011);
- a recordable medium for storing information such as a chip 11 (Fig. 1) circular disk (Fig. 27-29) or magnetic strip affixed to the back the card (Specification

par. 0011), inherently implies being disposed on the first layer of the metal card;

- a second plastic layer comprising of two layers upper and middle (Specification par. 0011), adjacent and laminated to the metal layer (Specification par. 0079), which is made of PVC (Specification par. 0070), known in the art as thermoplastic polyvinyl material

wherein the metal layer is made of titanium (Specification par. 0076) or 300 series stainless steel (Specification par. 0070, 0076), which is on the bottom (Specification par. 0011) of the card and thus provides a surface for the transaction card.

Conner does not suggest the first metal layer to comprise embossed characters.

Roberts discloses a card having a precious metal layer such as gold. Roberts doesn't expressly mention precious metals include titanium; however, titanium is known for its expensiveness and is therefore considered a precious metal. The characters representing account numbers and/or name are embossed onto the metal layer, which is done by laser etching techniques. See reference text below:

Laser etching is used to etch the gold to high definition and, optionally, the signature of the user may be laser etched or provided in the conventional manner by a signature patch and photograph. The account numbers and name of the card holder are embossed onto the gold layer. Advantageously, to conform with ISO standards, the card can be milled out to provide a recess of 600 micron to accommodate SMART card

technology and can thereafter be embossed. The recess could be provided by milling using conventional mechanical technology or laser etching, or by forming an aperture in the layers prior to lamination. Tests have shown that the peel strength is an important factor if the card is to meet the required ISO, European and British standards. The number 11 attached to the card, the dates 12, 13 of first validity and expiry and the name 14 of the card owner are all embossed into card.

Prior to-coating, due to the use of precious metals, the cards are assayed at the Assay Office in the United Kingdom or at the appropriate office in other countries.

The brand 15 of the particular type of card is etched onto the gold layer of the card prior to coating or printed onto the plastic cover by screen printing and laser etching or stamping. The magnetic strip 16 is attached to the rear of the coated card using adhesive. A signature patch 17 for the authorised signature of the card owner is likewise attached to the rear of the card using adhesive. It is conventional to secure holograms to charge cards in order to prevent forging. Such a hologram 18 may be secured in place on the coated card by adhesive as described (col. 4 lines 42+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Roberts to the metal layer of Conner since the incorporation would prolong the information embossed on the metal layer.

Regarding claim(s) 9 and 13, Conner discloses the magnetic strip is affixed to the back of the card, inherently implies the affixation is adjacent to the metal layer. Conner further mentions an affixation is accomplished by glue (Specification par. 0072), which inherently implies an adhesive layer being deposited already in order to glue/affix the stripe.

Regarding claim(s) 10, 12, and 14, Conner discloses all layers of the transaction card can alternately be made all of titanium layers or alloys or other metals (Specification par. 0076). As the result, the middle layer 33 or 6, interpreted as being the first layer of metal, is adjacent to the bottom being the second layer of substrate and the second layer is already proven in claim 9 for having an adhesive layer onto which the magnetic stripe is affixed (see discussion regarding claim 9).

Regarding claim(s) 20, Conner discloses the metal layers further include a cavity in which a chip 11 is embedded (Fig. 12).

Regarding claim(s) 22, Conner discloses the layers making up the transaction card can alternately be made all of titanium layers or alloys or other metals (Specification par. 0076) and the thickness of the card is desired to be compliant with ISO-7816 standard thickness of .031 inches (or 30 mils) (Specification par. 0068-69). Accordingly, the total thickness of the metal layer of the card in this embodiment is about 30 mils thick.

3. Claim(s) 15-17 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner (20050194453), modified by Roberts (6025283), further in view of Kaminsky (20040121257).

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Regarding claim(s) 15-17, Conner discloses all limitations set forth in this claim as discussed above, except a surface coating that is made of polyethylene terephthalate material and comprises a dye for providing color to the card. Kaminsky discloses a transaction card with a metal layer 16 coated on the surface with a colored dye donor layer made of polyethelene terephthalate (Specification par. 0078, 0091).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the color dye of Kaminsky into Conner's invention with the motivation for the desire for manufacturing cards with different colors for different financial institutions.

4. Claim(s) 21 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner (20050194453), modified by Roberts (6025283), further in view of Hinata (20030202151).

Regarding claim(s) 21, Conner discloses all limitations set forth in this claim as discussed above, except an oxide layer on a surface of the metal layer being formed from an anodizing process. Hinata discloses such technique is known in the art. See reference text below:

"The insulator 66 is fabricated of tantalum oxide (Ta.sub.2O.sub.3) that is obtained by oxidizing the first metal layer 65 through anodizing. When the first metal layer 65 is anodized, the surface of the first layer 79a of the line wiring 79 is also oxidized. Similarly, a second layer 79b fabricated of tantalum oxide is thus formed." (Specification par: 0133)

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize anodizing technique to achieve bonding thus preventing the metal layer from peeling off.

5. Claim(s) 23-24 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner (20050194453), modified by Roberts (6025283), further in view of Makishima (3468046) and Biller (20030150762). The teachings of Conner/Roberts have been discussed above.

Regarding claim(s) 23, Roberts discloses a card having a recessed pocket from which embossed characters are protruded by the embossing process so that the thickness of the card conforms with ISO standard thickness. See the following text:

“Advantageously, to conform with ISO standards, the card can be milled out to provide a recess of 600 micron to accommodate SMART card technology and can thereafter be embossed.” (col. 4 lines 46-49)

Conner-Roberts combination still fails to teach or reveal a filler panel being disposed within the pocket. However Makishima discloses card having a light filter 3 with translucent film 4, made so that the signature is invisible light in the visible spectrum but visible under ultraviolet light, is inserted to fill the pocket having indicia such as character signature in it (col. 3 lines 33-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a fill panel such as of Makishima with the motivation for the desire for further security for the transaction card.

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Regarding claim(s) 24, Conner-Roberts-Makishima together still fails to teach an adhesive layer being disposed within the pocket to adhere the fill panel covering indicia. However, Biller discloses a label, interpreted as the fill panel, is used to adhere using adhesive material and cover indicia on the card (see Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention use a fill panel such as of Biller's to cover indicia such as account number or signature area for security protection purposes.

6. Claim(s) 25 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner (20050194453), modified by Roberts (6025283), further in view of Hara (US Patent 4,876,441, Hara'441 hereafter). The teachings of Conner/Roberts have been discussed above.

Regarding claim(s) 25, Conner discloses all limitations set forth in this claim as discussed above except for the transaction card to have chamfer edges around the perimeter of the card. Hara'441 discloses chamfering edges are provided around the perimeter for protection of the core portion which houses peripherals (col. 11 lines 11-35, Fig. 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to be motivated to utilize Hara's invention to further protect the electronics inside such as chip and to avoid incidents caused by sharp and non-chamfered edges.

Remarks

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7. Applicant's arguments filed 8/28/2006 have been fully considered but they are not persuasive.

On page 6, Applicants assert that titanium and stainless steel are not a precious metal (page 6 line 4). It is respectfully submitted that Roberts teaches embossing of precious metal layer in a transaction card, wherein Roberts specifically defines "The term precious metal used herein includes **high value metals** such as platinum, gold (at all carats) and silver" (col. 1 lines 47-48). Website dictionary.reference.com also has definition of precious being high value or costly. To support for the argument that Titanium is of high value, at least having the same or better value than at least one of the three metals included in Roberts' teaching, Applicants are respectfully advised to view Non-Patent Literature documents obtained from merchant websites selling rings. www.amazon.com and www.saltlakesilver.com both show that Titanium rings having a higher value in price at least than those made from Silver. On another note, paragraphs 0058 and 0066 of reference Koike et al. (20020185561) also teach that "precious metals means a material having a small ionization tendency and, for example, gold, silver, nickel, titanium, chromium, a titanium alloy,... These precious metals have high durability and strength...". Har-Shai (6,544,315) in claim 12 considers titanium as precious metal as well. Therefore, although Roberts does not expressly mention Titanium in the precious metal group having high values, Titanium is inherently considered to be included therein.

On page 7, Applicants further contends that "In further support of patentability over Conner et al. in view of Roberts, Applicants note that titanium's and stainless

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steel's high strength-to-weight ratio and tensile strength further differentiates them from gold, silver, and platinum. Gold, silver, and platinum are heavy, soft and/or malleable metals. A sheet of soft, malleable metal is easily embossed. In contrast, titanium and stainless steel are relatively lightweight, hard, and exceptionally strong. Their strength and hardness make embossing difficult. Thus, by teaching an embossed gold, silver, or platinum layer, Roberts does not suggest titanium or stainless steel. Moreover, Roberts teaches a flexible card, one that is "sufficiently elastic to allow a surprisingly high degree of deformation" and has a "considerable degree of flexibility." (col. 2, lines 4-5 and lines 17-18) A card utilizing a layer of titanium or stainless steel would neither be considerably flexible nor surprisingly deformable. To the contrary, the same properties that make titanium and stainless steel difficult to emboss also makes them difficult to bend. Thus, Roberts must be read to teach away from strong and relatively inelastic metals such as titanium and stainless steel." It is respectfully submitted that Roberts' teachings include metals, as mentioned above, that have different degrees of hardness and strength. Although Titanium may be harder than any of those metals taught by Roberts, Roberts have recognized the relativity in strengths of the metals. Therefore, it is believed that an artisan skilled in the art would make use of the teachings of Roberts on Titanium.

Beside cited references, Patent issued to Tahara (5,300,169) teaches Titanium transfer foil that can be embossed and used in a card. Patent to D'Amato et al. (4,900,111) teaches embossing tin-plated steel sheet that is then attached to credit card blank.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien T. Mai whose telephone number is 571-272-8283. The examiner can normally be reached on Monday through Friday, 8:00 - 5:00PM.

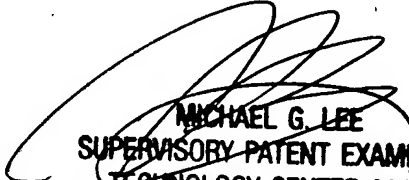
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thien T Mai
Examiner
Art Unit 2876

TM

January 07


MICHAEL G. LEE
SUPERVISORY PATENT EXAMINER
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